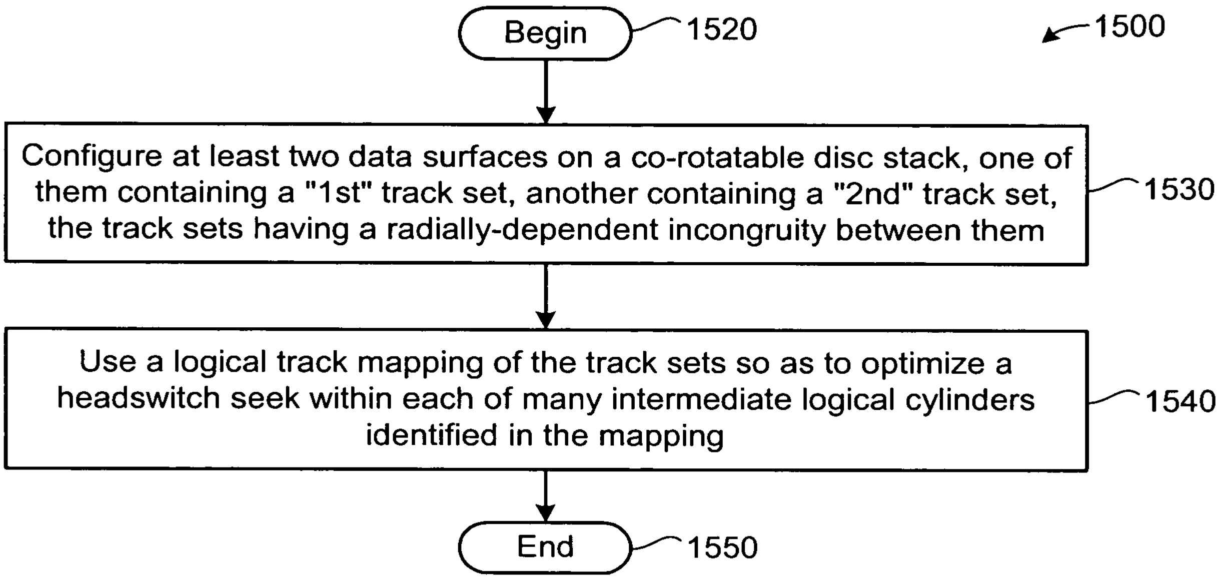
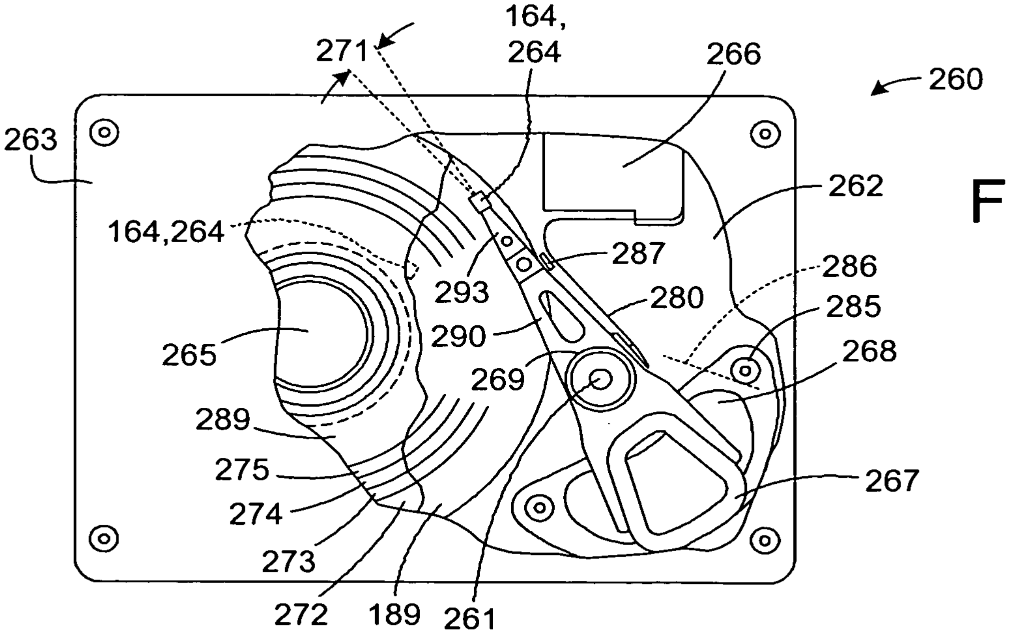

Begin
1520
1500
Configure at least two data surfaces on a co-rotatable disc stack, one of them containing a "1st" track set, another containing a "2nd" track set, the track sets having a radially-dependent incongruity between them
1530
Use a logical track mapping of the track sets so as to optimize a headswitch seek within each of many intermediate logical cylinders identified in the mapping
1540
End
1550

Fig. 1


164,
264
271
266
260
263
262
164,264
287
286
293
280
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265
269
268
289
275
267
274
273
272
189
261

Fig. 2

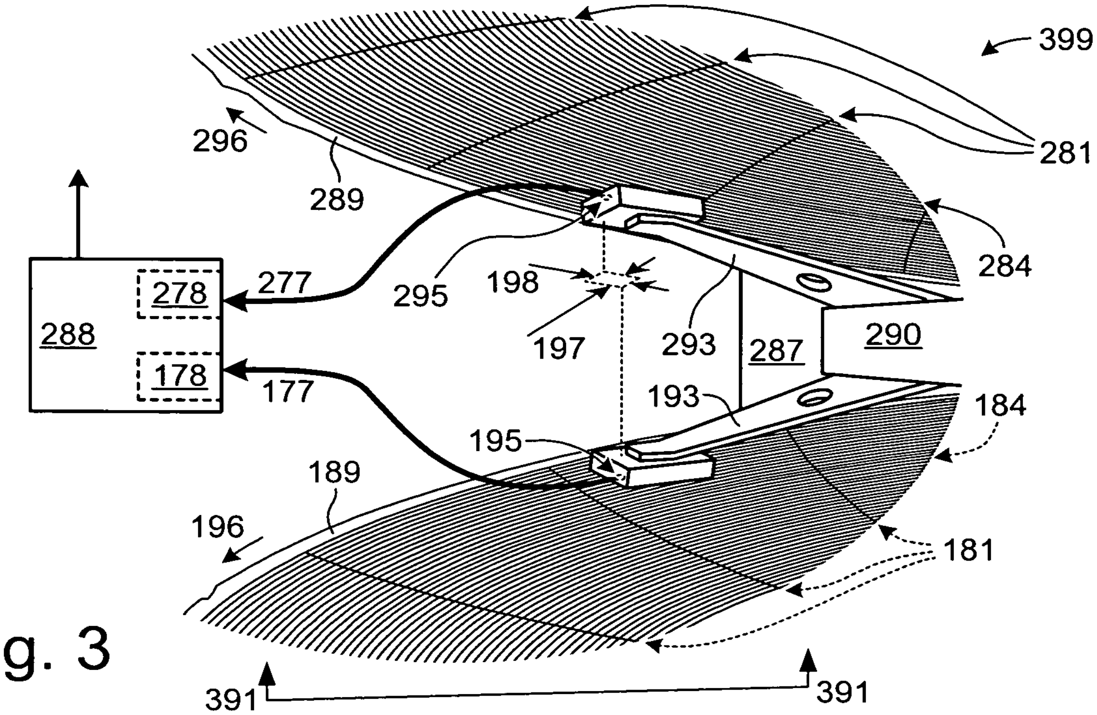


Fig. 3

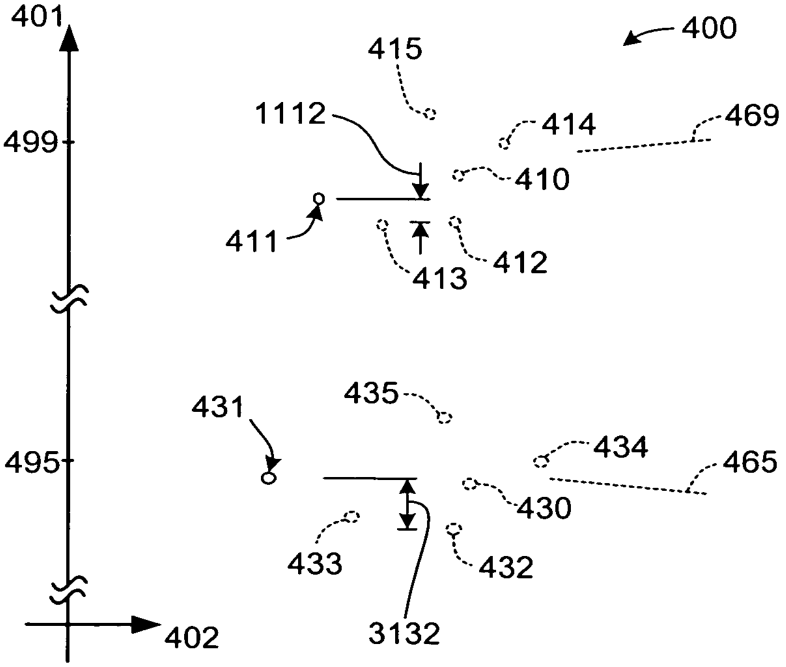


Fig. 4

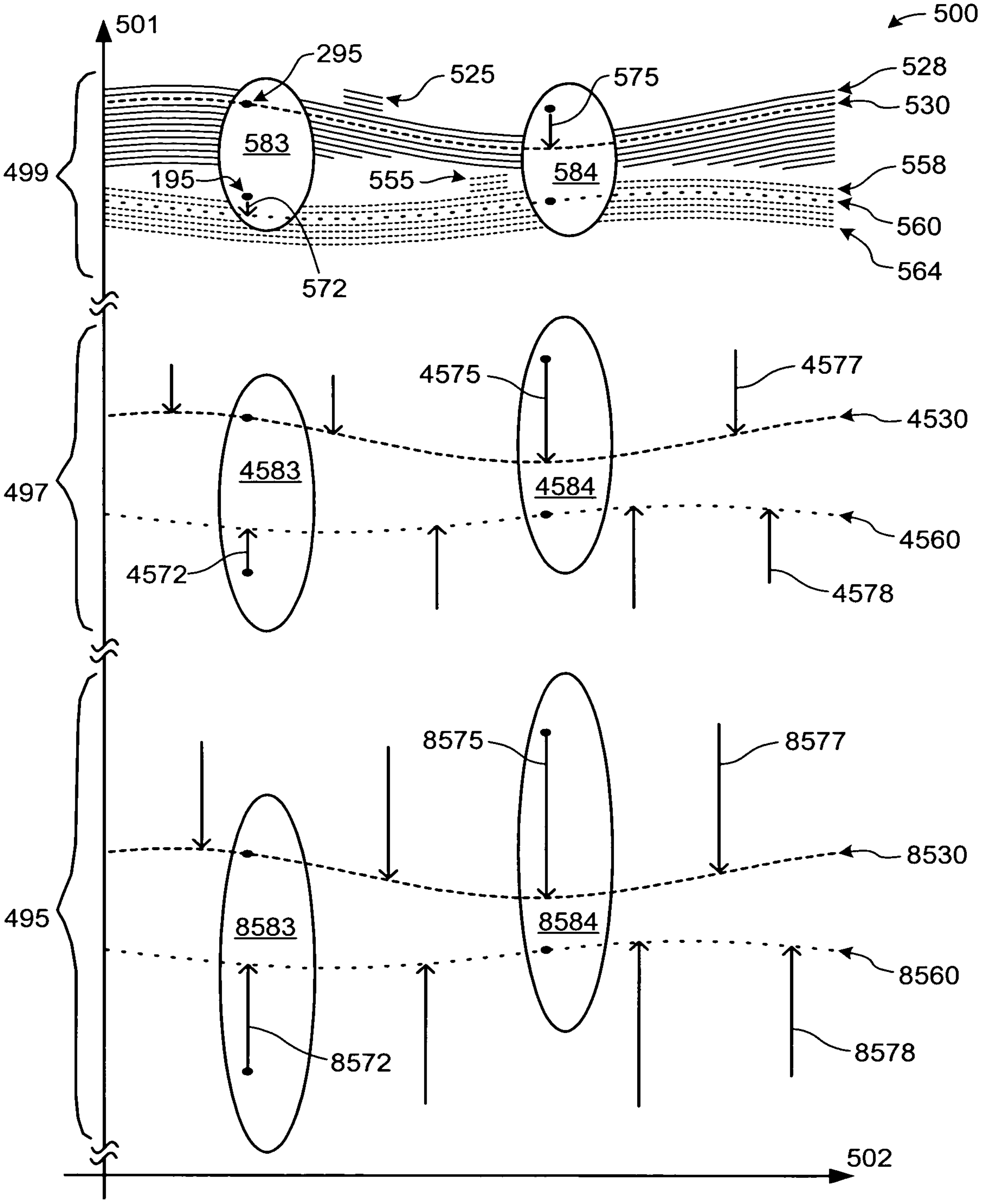


Fig. 5

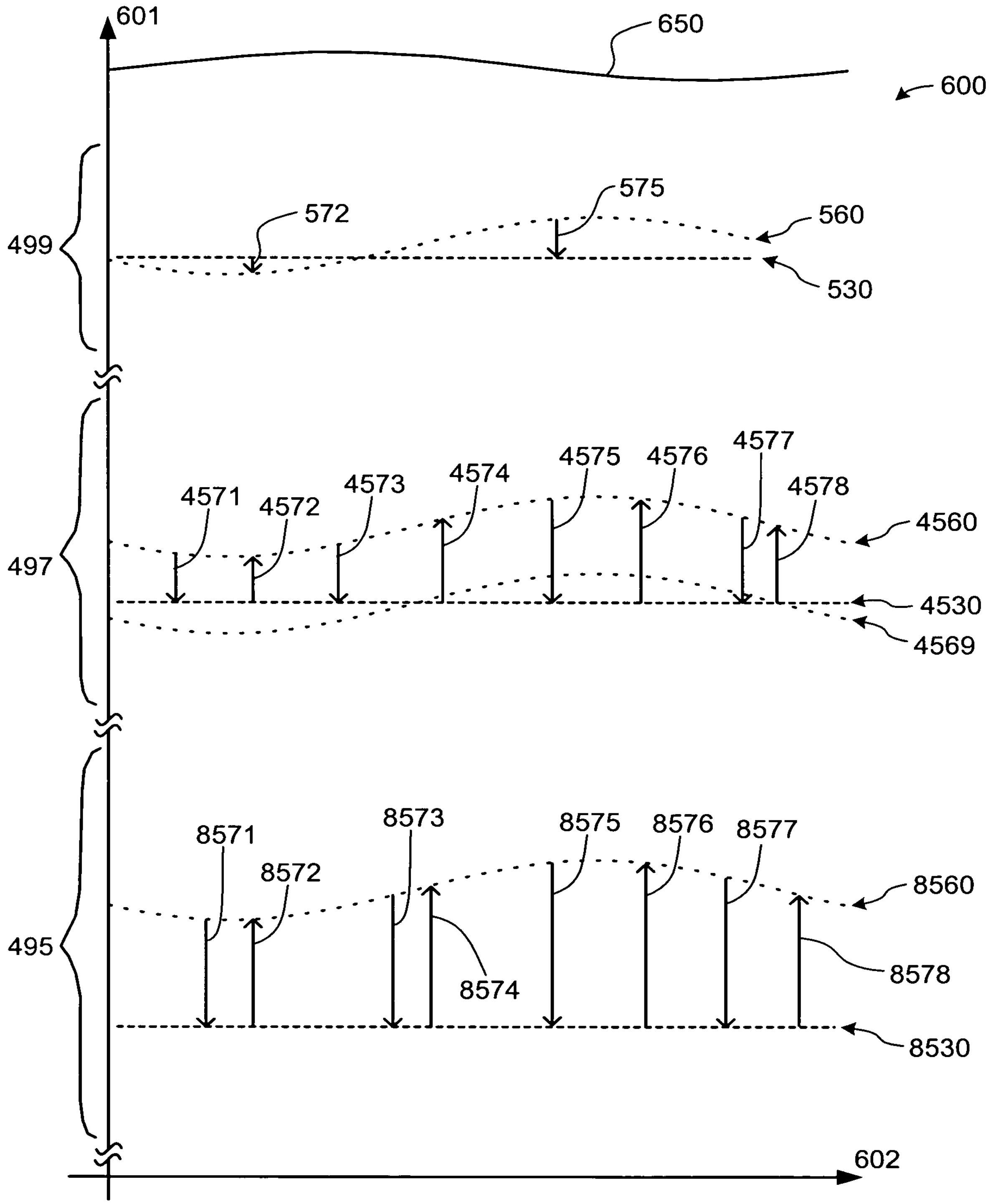


Fig. 6

Fig. 7

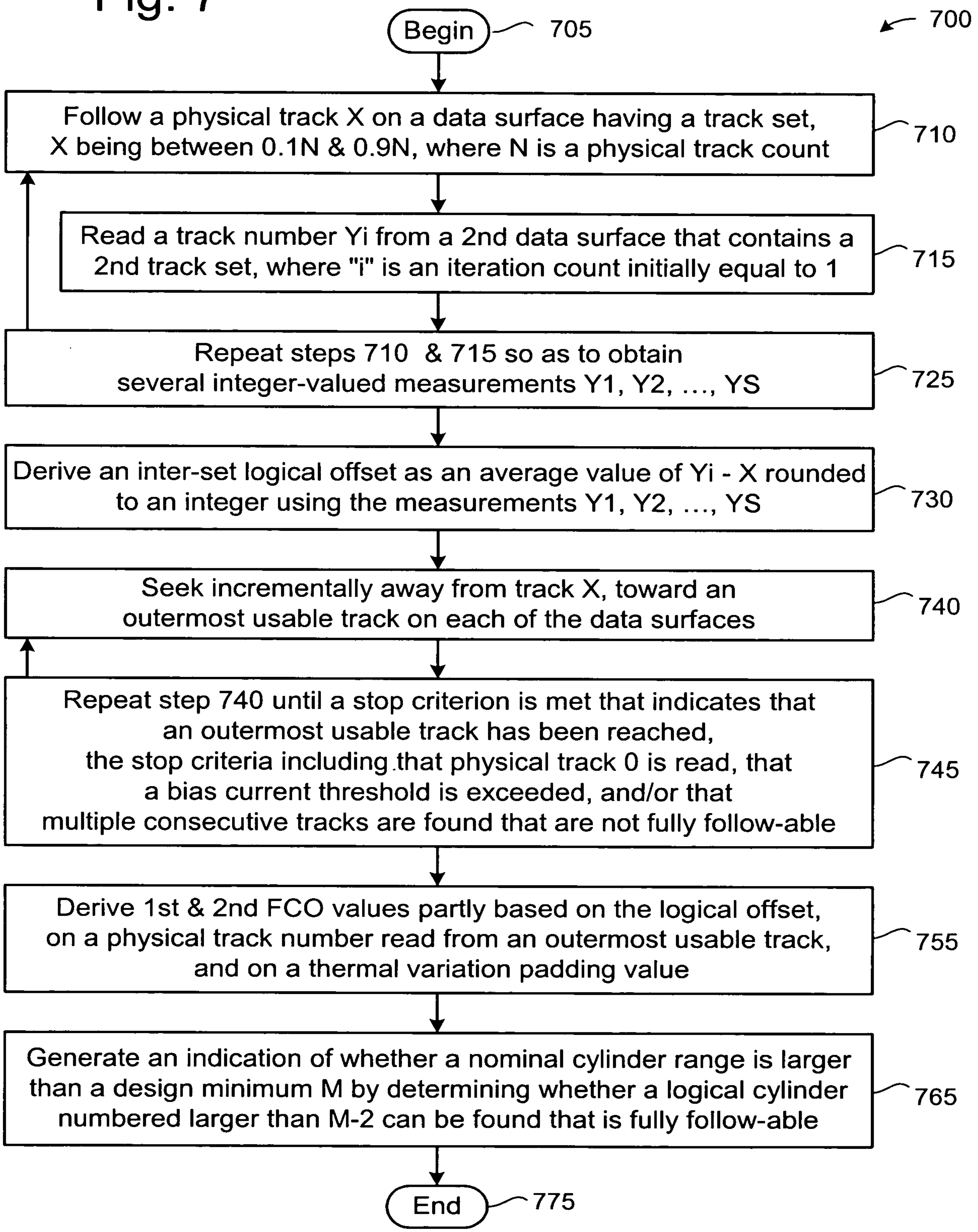

Begin
705
700
Follow a physical track X on a data surface having a track set, X being between 0.1N & 0.9N, where N is a physical track count
710
Read a track number Yi from a 2nd data surface that contains a 2nd track set, where "i" is an iteration count initially equal to 1
715
Repeat steps 710 & 715 so as to obtain several integer-valued measurements Y1, Y2, ..., YS
725
Derive an inter-set logical offset as an average value of Yi - X rounded to an integer using the measurements Y1, Y2, ..., YS
730
Seek incrementally away from track X, toward an outermost usable track on each of the data surfaces
740
Repeat step 740 until a stop criterion is met that indicates that an outermost usable track has been reached, the stop criteria including that physical track 0 is read, that a bias current threshold is exceeded, and/or that multiple consecutive tracks are found that are not fully follow-able
745
Derive 1st & 2nd FCO values partly based on the logical offset, on a physical track number read from an outermost usable track, and on a thermal variation padding value
755
Generate an indication of whether a nominal cylinder range is larger than a design minimum M by determining whether a logical cylinder numbered larger than M-2 can be found that is fully follow-able
765
End
775

Fig. 8

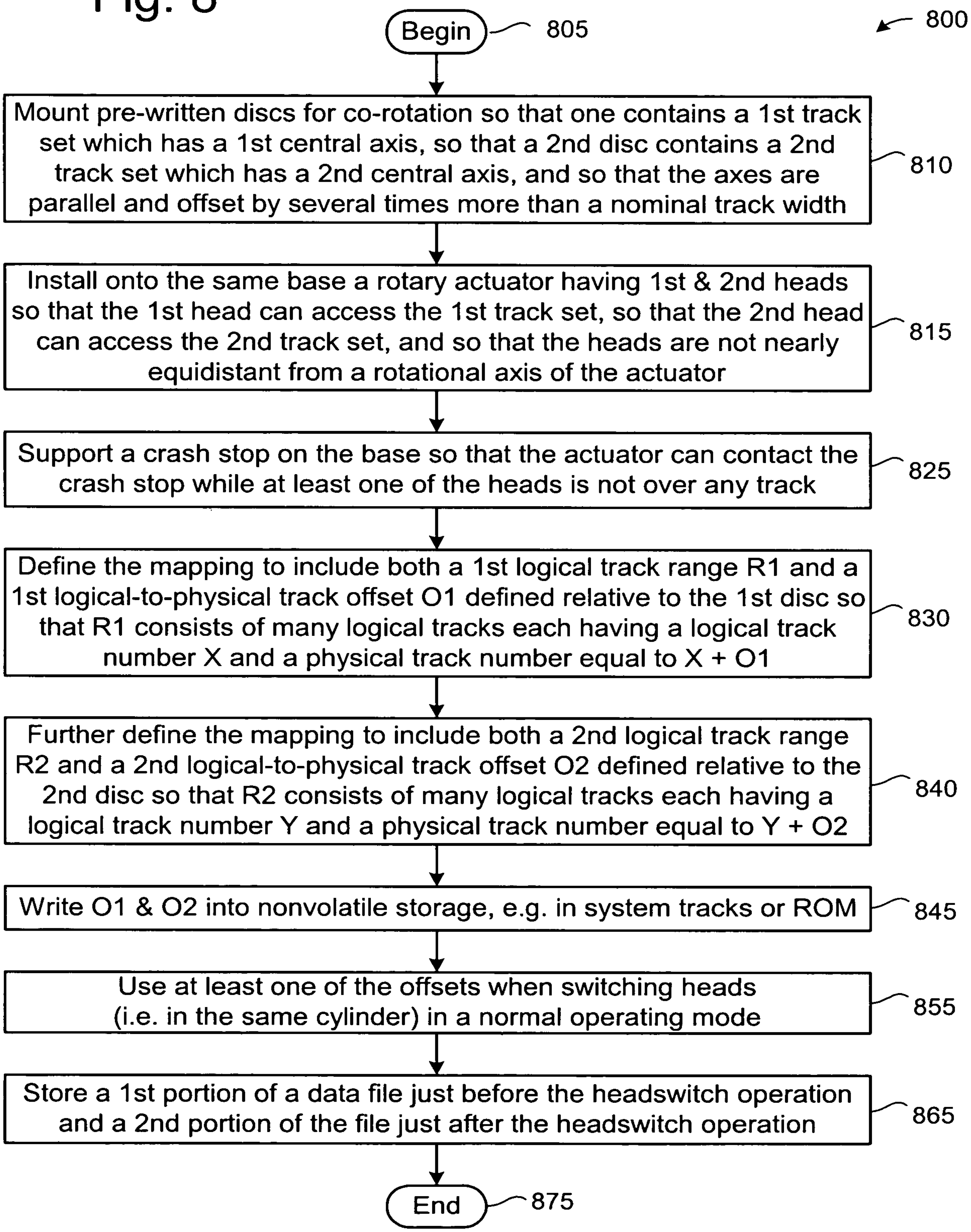
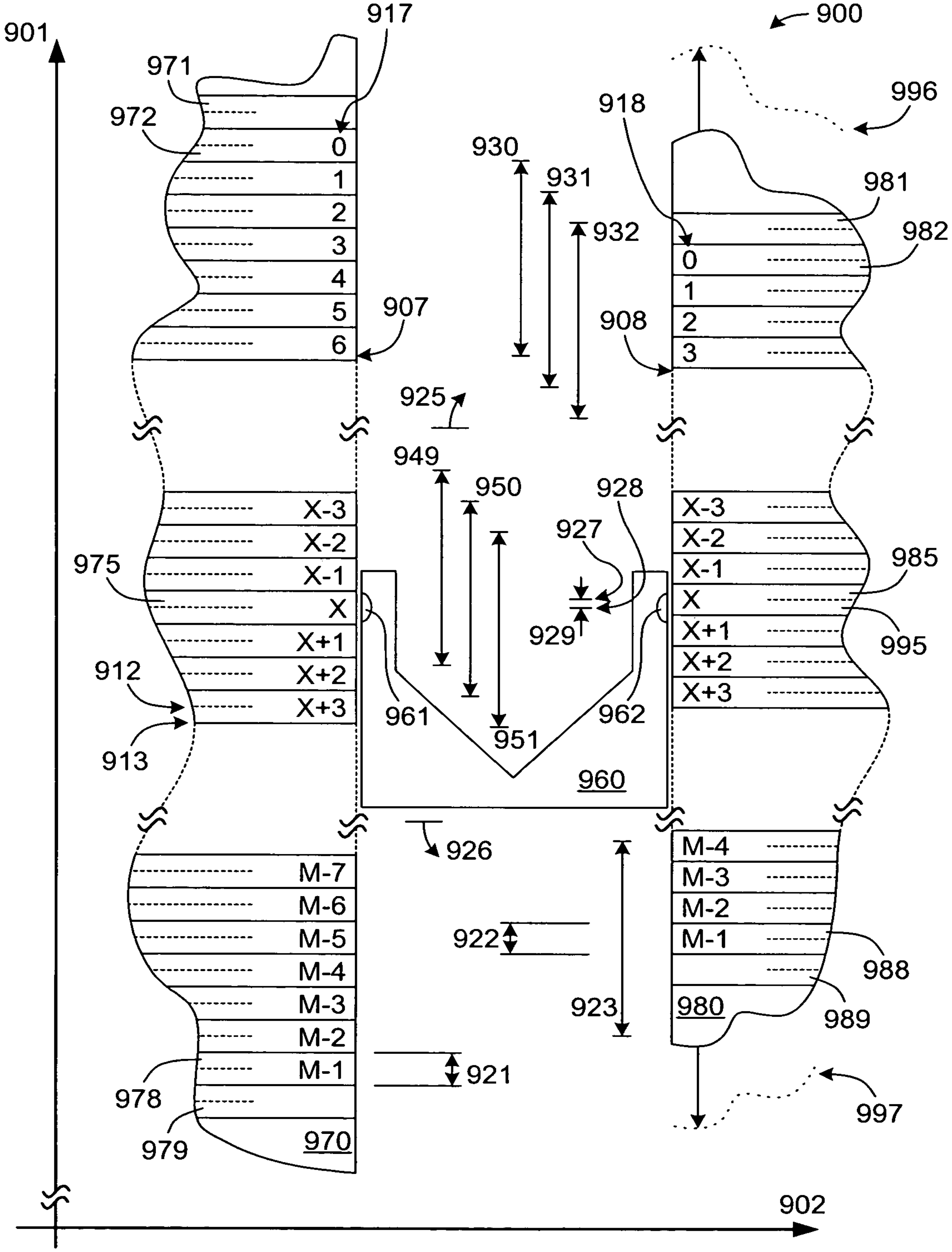

800
Begin
805
Mount pre-written discs for co-rotation so that one contains a 1st track set which has a 1st central axis, so that a 2nd disc contains a 2nd track set which has a 2nd central axis, and so that the axes are parallel and offset by several times more than a nominal track width
810
Install onto the same base a rotary actuator having 1st & 2nd heads so that the 1st head can access the 1st track set, so that the 2nd head can access the 2nd track set, and so that the heads are not nearly equidistant from a rotational axis of the actuator
815
Support a crash stop on the base so that the actuator can contact the crash stop while at least one of the heads is not over any track
825
Define the mapping to include both a 1st logical track range R1 and a 1st logical-to-physical track offset O1 defined relative to the 1st disc so that R1 consists of many logical tracks each having a logical track number X and a physical track number equal to X + O1
830
Further define the mapping to include both a 2nd logical track range R2 and a 2nd logical-to-physical track offset O2 defined relative to the 2nd disc so that R2 consists of many logical tracks each having a logical track number Y and a physical track number equal to Y + O2
840
Write O1 & O2 into nonvolatile storage, e.g. in system tracks or ROM
845
Use at least one of the offsets when switching heads (i.e. in the same cylinder) in a normal operating mode
855
Store a 1st portion of a data file just before the headswitch operation and a 2nd portion of the file just after the headswitch operation
865
End
875

Fig. 9


X-3
X-2
X-1
X
X+1
X+2
X+3
M-7
M-6
M-5
M-4
M-3
M-2
M-1
M-4
M-3
M-2
M-1